DataSpeak
"National and State Surveillance Efforts to Monitor Oral Health Disparities in Children"
April 16, 2008
Transcript

>> Dr. Michael Kogan: Good afternoon. And welcome to today's DataSpeak web conference on National and State Surveillance Efforts to Monitor Oral Health Disparities in Children.

I'm Dr. Michael Kogan, and I'm the Director of the Office of Data and Program Development in the Maternal Child Health Bureau. The DataSpeak series is sponsored through the offices MCH Information Resource Center.

Today, we're pleased to present the second DataSpeak program for this calendar year. Archives of the first 2008 DataSpeak program using GIS and MCH research and planning, as well as other programs held since 2000, can be found on the MCH IRC website at the address on the slide.

Today's program will focus on selected national and state level surveillance efforts to monitor oral health disparities in children. We're fortunate to have with us several knowledgeable presenters to share their experiences on this topic.

Our first speaker is Dr. Burt Edelstein, Professor of Dentistry and Health Policy at Columbia University and board chair of the Children's Dental Health Project. He will present findings from national data sources on the overall health status of children in America and discuss their usage of, and access to, dental healthcare. He'll highlight disparities in the oral health status and dental caries usage for specific sub populations of children, and will discuss policy implications of the available data on children's oral health.

Our second presenter will be Dr. Jay Kumar, Director of Oral Health Surveillance and Research for the New York State Bureau of Dental Health. He'll present details on the state's current surveillance efforts and methods of disseminating the data. He'll also discuss the resulting changes in policy and some of the challenges and opportunities in the field.

Our third speaker will be Dr. Mark Siegel, Chief of the Bureau of Oral Health Services for the Ohio Department of Health. He'll discuss the current data on dental health among children in states, with particular attention paid to disparities by race, income and payment source. Dr. Siegel will also discuss the Department of Health's extensive efforts to disseminate the data to professionals and the public, especially at the county level through the Department of Health's website.

I'd now like to turn the program over to Vivian Gabor from Altarum, the moderator for today's program.

Vivian, take it away, please.

>> Vivian Gabor: Thank you, Michael. Welcome to all of our participants. We're delighted to have everyone with us today. Before we begin our presentations, I have just a few housekeeping items to take care of.

For those who are logged in via the Internet you'll be seeing an ongoing slide show throughout the next hour. At the end of the program, we'd greatly appreciate it if you could take a moment to complete the short evaluation survey. We will provide instructions for doing so at the end of the program.

Your phone line will be muted during the presentations today. After we hear all the presentations, we'll have a question and answer session. You'll have an opportunity to ask questions through the operator who will come on at that time to provide instructions for doing so.

You'll also be able to post questions on line at any time during the program. If you're logged in via the Internet, you can enter your questions in the question box on the left side of your screen and hit enter.

If you encounter any technical problems during the presentation, please feel free to call the MCH IRC help line at 202-842-2000. Note that additional resources on today's topic have been posted on the DataSpeak website, including those that our speakers will highlight in their presentation.

Now it's time, and I'd like to turn to our first presenter, Dr. Burt Edelstein. He'll begin our discussion of current efforts to monitor disparities in children's oral health. Welcome, Burt, and thank you for joining us today.

>> Burt Edelstein: Thank you.

>> Vivian Gabor: I'd like to start by asking you to provide our audience with an overview of the most recent available data on children's oral health status.

>> Burt Edelstein: Vivian, since you asked about the overall oral health of the children, oral health status, I think the best place to start is by keeping in mind the full range of disease and developmental conditions that impact children's oral health. So on the next slide you can see that there are a variety of such conditions.

The first is tooth decay. Tooth decay is the condition we'll be talking about most, because it is the most common. And ironically it's also the most preventable. But the mouth is also an integral part of the child's entire body and is at risk for the full range of diseases as the rest of the body, plus a few others that are special to the mouth and the teeth, the gums and the jaws.

So as we take a look at the list here, you see the first problem is tooth decay, which remains the most prevalent disease of U.S. childhood and has significant consequences.

The second is periodontal disease, which occurs as both inflammatory and idiopathic. Then malocclusions are bad bites that range from the minor to the handicapping. And developmental disturbances of the teeth and jaws, mucosal lesions of the soft tissues, traumatic injuries and oral manifestations of systemic diseases; but, overall, I think it's important to keep in mind that while we'll be talking about tooth decay today, the critical thing to understand about children's oral health is that it involves a number of structures and a number of diseases.

>> Vivian Gabor: What do we know about the overall prevalence of tooth decay? You said it's the most important among children.

>> Burt Edelstein: As you can see from that graph, from the NHANES 3, study of 1999 to 2004, tooth decay continues to impact the majority of children after age six and more than a quarter of all toddlers and preschoolers in the U.S.

It's also clear from the bar chart that tooth decay does continue to increase with age. That's because it's a cumulative disease. In fact, the best predictor for future cavities in any given child is the presence of past cavities. The chart also shows between the red and the blue the proportion that is treated and the proportion that's not treated.

The red part of the bar shows that the proportion of children who are still in need of treatment increases with age. But that nearly three-quarters of two to five-year-olds who have tooth decay are in need of treatment.

It's also important to note that tooth decay was on a downward trend for decades but the latest CDC reports show that the proportion of young children with cavities has now increased.

>> Vivian Gabor: Thank you, Burt. What did the data tell us about disparities by race and income?

>> Burt Edelstein: Well, even as we look at the distribution of decay in the population, CDC's NHANES data suggests that there's significant racial disparities as well as income disparities. Of course, race and income disparities are interrelated. But as the data shows, the poor have significantly higher caries rates and the working poor moderate caries rate compared to the non-poor. Similarly, Mexican American children, which is the Hispanic group followed by NHANES, has the highest tooth decay experience amongst U.S. children compared with black children and white children.

So there are significant disparities by both race and by income.

>> Vivian Gabor: What did the data say about children with special needs?

>> Burt Edelstein: There's a real problem identifying sound data about the oral health status of children with special healthcare needs. Because there's not a comparable examination survey that represents national prevalences the way the NHANES data do.

On the other hand, MCHB's National Survey of Children with Special Healthcare Needs does provide useful information on unmet need for dental care compared to other forms of unmet need for children who have special needs.

And what the data show is that the unmet need for preventive dental care is very considerably higher, multiple times, the unmet need for preventive medical care for prescription drug care and for vision care.

So the prevalence is relatively modest as reported by parents. But specifically for those children who have issues of mobility, movement control, verbal communication and cognitive comprehension, those are the kids who face the most significant challenges and for whom the dentists face the most significant challenges in obtaining and maintaining oral healthcare.

>> Vivian Gabor: Interesting, Burt. If you look, you told us about pockets of populations, large populations with disparities. Overall, what are the long-term trends in the prevalence of children's tooth decay over time?

>> Burt Edelstein: Well, the good news is that long-term there's been a significant and really quite remarkable decline in tooth decay amongst U.S. children. But that doesn't mean that we're out of the woods.

Most worrisome is the significant increase in tooth decay amongst America's youngest children. After 40 years of declining prevalence, tooth decay amongst two to five-year-olds has begun to increase. Because having cavities early in life, as I mentioned earlier, is the best predictor of continuing to have cavities throughout life, this increase portends a longer term negative effect.

If we get the chart up, we'll see that tooth decay amongst two to five-year-olds was reported at about 24 percent in 1988 to 1994 and has risen to 28 percent. That is on a percentage basis relatively modest, but it's trending in the wrong direction. And, again, the children who have tooth decay at the youngest age are the children who are most susceptible to having cumulative decay over a lifetime.

So we do believe that this is a worrisome trend.

>> Vivian Gabor: Now you talk about different sources of data. You've been talking about some different sources of data on children's oral health. Why are the findings different in the parent reports versus the

direct examinations of children? And what kind of conclusions would you say we can draw despite the differences?

>> Burt Edelstein: It's always tricky when we have to rely upon parent reports, whether of oral health status or, as we'll see later in the presentation, the use of dental services.

It's always a little bit tricky when we rely on parent reports, because you have recall issues. You have issues of clarity, exactly what the questioner is asking. But it's especially difficult when you don't have matched data where you can actually ask a parent and then side by side with that look in the child's mouth.

There are a couple of such studies and two of them are featured on this slide, on the left-hand side. But if we focus on the bar graph, what we see is parent reports in blue of unmet need for dental care, which is certainly not the same as having a dental problem.

But we laid that side by side in yellow the percentage of children by age who did not have a dental visit. For example, amongst the preschoolers you can see just over 20 percent of parents say their children have just over 20 percent report that their children have an unmet need.

And, yet, over 70 percent have not had a dental visit. So this suggests that parents may be understating either because they don't know what to look for as a dental problem, or because they don't regard the need for dental care as an essential need for their child.

But there's clearly a differential between what the parents are reporting and what the provision of care currently is.

>> Vivian Gabor: That is the MEPS data that you were, the yellow bar?

>> Burt Edelstein: Yes, the MEPS data reports by age on the percentage of children who have had a dental visit.

>> Vivian Gabor: Thank you. Now, we know that many in medicine and dentistry, including the Children's Dental Health Project and the American Academies of Pediatrics and Pediatric Dentistry, advocate for engaging physicians in conducting oral health assessments, particularly for young children who routinely go to preventive care physicians. How accurately do physicians assess these children's oral health?

>> Burt Edelstein: I think the critical thing is to keep in mind how important it is to engage the entire child healthcare system in focusing on children's oral health. And so every contribution made by physicians and by other health workers and nutrition workers and educators and others who work with children, particularly young children, can contribute to advancing children's oral health and improving the condition where we have far too much disease given the preventive nature, preventible nature of this disease.

But what this particular study showed was that in this small North Carolina study it showed that physicians are very good at identifying the absence of disease and the absence of treatment need. But they're not quite as accurate in identifying the presence of problems.

So it does suggest, as many have suggested before, that integrating oral health into the training, the education and training of physicians, and particularly pediatricians, family doctors, nurse practitioners, who work with young children and families providing primary care, can go a long way toward helping identify those children at risk as well as providing preventive education.

>> Vivian Gabor: Okay. Now, let's turn to data you mentioned on children's usage of dental care and their access to dental healthcare providers. What are the findings on this topic from national surveys and other available sources?

>> Burt Edelstein: Vivian, here we're going to switch gears altogether from underlying disease, which we see is far too prevalent given that we know so much about preventing the disease, and we're going to switch instead to the provision of dental services.

And whether or not children receive care or how many children do receive care is really a function of who you ask and how you ask the question. What you see in this graph on the right-hand side of the slide is that different national surveys report different levels of dental service for children by age.

And if we start with the blue in the middle, this is from the MEPS. And the MEPS is the most demanding on parents. It has the shortest recall period and it's generally regarded as the most reliable parent assessment.

And what we see there is that on average, less than 50 percent of children receive a dental visit in a year. The two at the top that track very closely together are from NHIS and NHANES. And there the question is more generic and the recall period is longer. So parents tend to more markedly overstate their children's use of dental services than they do tend to overstate their children's oral health.

The black line is a special concern. And that's because it reports on dental service utilization amongst children in Medicaid. What we see there is the children in Medicaid, the very same children, the lower income and tend to be more minority populations that have the greatest disease are accessing services the least.

Interestingly, all four of these plots show the same pattern by age. With the preschoolers having insufficient volume of services, whereas there's a higher rate for school-aged kids and it dropped off again as so many things do with teens amongst the teenagers.

So we really need to focus on not only raising the bar altogether across all ages, but particularly increasing the use of services for the very young and then for the teenagers.

>> Vivian Gabor: We know that the MCHB asks states to report each year on pediatric oral health performance measure, percentage of third grade students who have received dental sealants. What can we learn from that measure and the collection of data by states to support it?

>> Burt Edelstein: Let me get to that in just a moment. Let's go back one slide where we can see the disparities. Actually, if we can go back -- there we go. Go back to the disparities by race and income, we see that the poor have far fewer visits than do the high income children. And that minority children have fewer visits than white children.

So, again, the children who have the worst problem have the least use of care. If we go on to the special needs issue, the next slide, we see that special needs kids who are in this slide in blue, compared with all U.S. children in red, pretty well do march along at the same levels of service as do the special needs kids march along at the same level as all children.

But here we see, again, these tremendous disparities by income. So what we really understand when looking even at the special needs population is that the differentials in service use are really much more a function of income and this has implications for the Medicaid program and for SCHIP because the working poor and the low income populations that receive the least care are those who are insured by those programs.

In terms of parents' reports, we see here clearly that if we go back to those MEPS data showing the percentage of kids who we think pretty reliably did get a dental visit, and we compare it with the National Survey of Children's Health, we see that parents when asked a more simple question: Did your child have a dental visit in the last year? tend to overstate the occurrence of a dental visit. And that's true for preschoolers, for school-aged children and for adolescents. For preschoolers and adolescents it approaches a two-fold difference between parental reports on NFCH and parental reports on MEPS.

>> Vivian Gabor: Wow.

>> Burt Edelstein: Thank you for going back with me. Now we can head to the sealant prevalence.

>> Vivian Gabor: Yes. Sorry I jumped forward there.

I'm interested to hear your perspective on what we can learn from this measure and the collection of data by states to support it. That is on the percentage of third grade students who received dental sealants.

>> Burt Edelstein: The MCHB does in fact require that states report on the provision of sealants for third graders. And when we try to compare that with national data, what we turn to is, again, the NHANES three where we can take a look at changes in the darker bars, between 1988 and 1994. And in the lighter bars, with the period that ended in 2004.

And what we see is that there's been a nice bump-up in the total and by age and by income. So altogether, there are definite improvements so that by time children are teens we have a marked increase.

On the other hand, fewer than 50 percent of all U.S. children have had sealants by the time they're teenagers and we have the same kind of income-related disparities that we saw before. So one more time we have the children who are more affluent, have less disease, having more sealants and the children who are in poverty having less sealants.

So we have both good news and bad news on this slide. We're definitely heading in the right direction, but the total volume is still low and the disparities by income remain.

>> Vivian Gabor: Good summary of the many points you brought up Burt both in terms of oral status, dental care usage and now sealant prevalence. Overall, what does the data indicate regarding sub populations that may need a continued or enhanced focus by planners and policymakers focused on children's oral health?

>> Burt Edelstein: We've already noted the lower service utilization by the young and by teenagers. We know that children with special healthcare needs, particularly those who have significant issues of mobility and communication are a particular population of interest. But as we cut across all of these data we find that the poor and the working poor suffer significant disparities.

So of particular interest are those who are impacted by poverty, by age, and by special needs status. But the real take-home message, which I have rather intentionally belabored through this discussion is that those children with the greatest oral health needs have the least access and the least utilization of dental care. And if we look at that total volume of care, of care needed, the total volume of disease, we readily recognize that the only real ticket out of this problem is prevention.

And early prevention is the key to reducing disease burden. Otherwise, we have this upside down situation where, as we see in the next slide, it's essential that policymakers, program managers, oral health professionals, medical professionals, and all of the different kinds of folks who are on this call today, work to turn this upside down situation right side up.

>> Vivian Gabor: In your perspective both the research and policy arenas as well as your close works I know with many states oral health programs, how is the available information or data being used and applied in the development of public policy and program planning?

>> Burt Edelstein: From my perspective and experience now working on pediatric oral health programs and policy for the last decade, I would strongly suggest that both programs and policy are rarely driven by data, yet they're never possible without data.

In other words, data sets the process in motion by validating claims that there's a problem and that that problem is worthy of public redress.

However, once that essential point is made, I think it's rare that data itself drives the policy-making or program process forward. So in short, I'd suggest that having substantive, authoritative, readily accessible, well-framed, well presented data is a necessary but not sufficient condition for moving reform forward.

Certainly for programs themselves, data is the essential component of doing sound evaluation and tracking performance. So there's a little bit of difference between the policy-making side and the program side. But in both cases, data is critically important to get the problems, to get the problem addressed and then to monitor performance as reforms are suggested and implemented.

And if the data don't show that progress is being made, it's a good indication that something else needs to be tweaked. And if it shows successes, it suggests that replication is in order.

>> Vivian Gabor: Briefly, before we close, what would you say would be your recommendations for folks on the phone of data collection and reporting systems for children's oral health can be more useful?

>> Burt Edelstein: This slide articulates five specific suggestions, kind of lessons learned the hard way, about making oral health data useful for program management and policy making. First is making sure that the data that you use, the data that you select, the data that you seek is actually the data that's most useful for the program or for the policy issue that's under consideration.

As you saw today, we had a little bit of trouble trying to answer the question about just how good is the oral health status of children with special healthcare needs. So if that's the issue that we want to know about, we need to make sure that our data sources look after that. Similarly, if we want to know about consequences, I mentioned briefly at the start that dental caries has strong consequences. We need to develop a meaningful morbidity mortality pyramid that explicates exactly what the impact of this disease is.

Those data are just generally not available. And so we should identify the data that's most useful. Secondly, in having useful data, we should select out those data that are most relevant to the particular people who are involved in making the program and policy decisions.

People who are in a position to enact programs, to manage programs or to enact policies need to have the kinds of information that best suits their particular needs. So, for example, members of Congress are often

interested in state-specific data rather than national data because they need to address the concerns of their own constituents.

A third element is that the data needs to be presented in ways that really work for the audience. The data needs to be clear. It needs to be succinct, and it needs to always be accurate.

When data are presented in ways that look complex to the audience they tend to get disregarded. The fourth is framing the data. The data really in and of itself is not as useful as the message that the data can convey.

So the data needs to be framed in terms that are most useful to support the program, or if your program or policy position is being challenged the data need to be framed in the way that's most useful to defend the challenge that is being made.

Then the cardinal rule of providing information to policymakers and program managers is to never ever, never ever even remotely stretch the data to support your position.

The data need to be accurate, reliable, and they need to be honored and respected so that the information is conveyed in a way that is perfectly reliable and defensible.

>> Vivian Gabor: Thank you, Burt. If our audience wants to get in touch with you after this presentation, how should they best contact you?

>> Burt Edelstein: This slide has contact information for both my university position and my work with the Children's Dental Health Project. There are two phone numbers, and the e-mail address is the same for both. You can reach me through ble22@columbia.edu. Thank you so much for asking.

>> Vivian Gabor: Thank you so much, Burt, for your excellent presentation.

Now I'd like to turn to Dr. Jay Kumar, he's Director of Oral Health Surveillance and Research for the New York State Department of Health Bureau of Dental Health. Welcome Jay.

>> Jay Kumar: Thank you. Glad to be here.

>> Vivian Gabor: What does the picture of oral health look like among children in New York State.

>> Jay Kumar: It's somewhat very similar to what we observe across the nation. New York has made substantial progress in oral health over the years. But this improvement is not sufficient to accomplish the Healthy People 2010 goals and objectives.

In the next slide, we show the current prevalence of dental caries in New York State. As you can see, the average among third grade children is about 54 percent, with a standard error for about 1.3 percent. So this graph was generated from a survey of about 11,000 third grade children conducted between 2002 and 2004. It shows geographic variation and the prevalence of dental caries expressed as percent with caries experience by county.

Many counties made progress toward Healthy People 2010, or the state target of 42 percent. But as you can see, some of the counties marked shown as red here, they have still -- they have to make a lot of progress to reach the target in New York State.

>> *Vivian Gabor:* What do you do to tell about the reasons for these variations in dental caries prevalence across the state?

>> *Jay Kumar:* One of the most important determinant of dental caries prevalence is socioeconomic status. And here we examine the data by participation in the school lunch program. So on this slide both caries prevalence and untreated caries are shown.

As you can see, there is a disparity in dental caries prevalence and untreated caries between low and high income children.

Especially untreated caries is higher among low income children. It was about 40 percent compared to about 23 percent in low income -- in high income children.

Another reason for the variation in prevalence as reliance untreated caries is the availability of population-based and personal preventive services, and also the availability of insurance coverage and dental care.

>> *Vivian Gabor:* What are you seeing in terms of disparities across geographic areas by income if you look at the other indicators such of prevalence of dental sealants among third grade children, the MCHB performance measure for children's oral health and what are the trends in your state?

>> *Jay Kumar:* This map shows the prevalence of sealants in New York State, and it was collected as part of the same survey.

And the prevalence in New York State was only about 27 percent, and our target is 70 percent. So it's well below our target of 50 percent. Again, there is wide variation in the prevalence of dental sealants in New York State.

Some counties shown here in green color, they have already accomplished the target and are all very close to accomplishing the target. But there are counties, especially small counties, where it is lower and the

prevalence in New York City here shown in red which has a population of more than 100,000 third grade children was also low.

The next slide shows the prevalence by income and region. And in this slide both prevalence, both by income and by region are shown. As you can see, the prevalence of dental sealants among low income children was only about 18 percent. And there was also variation by geographic region when compared to the rest of New York, New York City, had a very low prevalence, only about 12 percent.

It's also interesting to note that a city like New York with a high concentration of dentists and dental clinics has low prevalence.

Medicaid is a program that reaches many low income children. So in the next slide we try to examine the trends in the use of sealants in the Medicaid program. Again, by region and year. As this graph shows, the use of dental sealants in the Medicaid program was also very low. Only about eight percent of children eight to nine-year-old children in 2006 received dental sealants.

And there was no difference in the use of dental sealants in upstate and down state. So that cannot explain the variation, geographic variation in dental sealants.

>> Vivian Gabor: Interesting. What do your data show are the kinds of population-based interventions? You mentioned something earlier needed to promote the prevention of dental caries among children.

>> Jay Kumar: One explanation for the variation in the prevalence of sealants is the presence of school-based programs in several counties. This slide shows the prevalence in upstate New York schools by school-based program status.

In those schools where there is a school-based program, children have reached the target of 50 percent. It's interesting to note that even when sealants were made available, there is still a disparity between low and high income children. You can see only about 63 percent of children, low income children in a school-based program, had dental sealants. Versus 71 percent among high income groups, which shows the need for active participation even when school-based programs are presented in a school setting.

The next slide focuses on another population-based program that is fluoridation. And it shows fluoridated and non-fluoridated areas in New York State. About 12 million people receive fluoridated water in New York State, but we are -- and that is about 70 percent of the population. Slightly below the target level of 75 percent.

There are pockets of areas without access to fluoridation. One reason we emphasize fluoridation is that it reaches everyone irrespective of the socioeconomic status. In Upstate New York, only about 40 percent of the population receives fluoridated water.

The next slide shows an alternative to fluoridation that is the prescription of fluoride tablets. And it is very difficult to obtain compliance with this particular preventive measure. So fluoride tablets are prescribed in areas mostly in non-fluoridated areas. This slide shows that a disparity exists in the reported use of fluoride tablets. Even when alternatives are available, as you can see compliance is lower. This is one reason why we need to promote fluoridation.

>> Vivian Gabor: Thank you, Jay. What do your surveillance data indicate about oral health of younger preschool children, and what can you say from your vantage point at the state level about why this is an important group to be targeting?

>> Jay Kumar: This slide shows inpatient and outpatient hospitalization rates per 10,000 children for caries in three to five-year-old children in New York State. Traditionally, health departments focused on school aged children. Now we're focusing on younger children. One of the reasons is because in New York State about 4,000 three to five-year-old children are seen in the hospital setting for treatment of dental caries. It's expensive and also very difficult to treat in a regular dental office setting.

And this is one of the reasons why we are focusing on younger children.

>> Vivian Gabor: Interesting. There's a great deal of available data from New York on children's oral health. How are you using the information or how is it being used both by others at the state level or at the local or community level in your state?

>> Jay Kumar: These data are provided to local health departments for our planning purposes, so these data are incorporated in municipal health services plan. It's also used for setting targets, as in state oral health plan development and also to focus on specific activities like the guidelines for oral health care during pregnancy in young children that we developed in New York State.

Programs also use these types of data to demonstrate need, justify programs and write grant applications. Groups like the New York State Oral Health Coalition have used the data for advocacy purposes. Finally, for reporting for the national oral health surveillance system, this data are very useful.

>> Vivian Gabor: Similarly to a question I asked Burt, from your perspective, what are some of the state policy and program changes that have actually occurred in New York State in response to your state surveillance findings?

>> Jay Kumar: Because the wide variation in the use of dental sealants and also access to fluoridation in different parts of New York, there is more emphasis on increasing the number of people covered by fluoridation and school-based and school linked programs in New York State.

We are emphasizing the use of dental sealants as an example New York City Department of Health and Mental Hygiene Program where the focus now is more on promoting dental sealants compared to providing dental treatment.

But also exploring ways to use social marketing techniques for promoting the use of dental sealants. There are also some other changes occurring in New York State and I list them in the next slide. A law was passed in New York in 2007. This is a new requirement to promote dental health certificates in schools, and this will encourage children to visit dentists in a timely manner to seek dental care.

There's also more emphasis on dental visits very early, especially in zero to three year age group. Also we are trying to bring together stakeholders in regional forums to come up with local solutions to address these variations in oral health status in New York State.

>> Vivian Gabor: What do you see as some of the future challenges and opportunities in monitoring children's oral health?

>> Jay Kumar: One of the challenges is collecting data on a regular basis from every county. It's very difficult, time-consuming and very labor intensive to collect data from every county. There are some opportunities. If we can implement the school dental health certificate program in a uniform way across New York State, we may be able to gather the data directly from school records.

The other method that we can use is through the utilization data from Medicaid and managed care. We can expand the reporting system to include more indicators like prevalence of dental sealants. We are also testing electronic records in two sites to see if we can gather caries prevalence and severity data from dental records.

>> Vivian Gabor: If our audience would like to contact you, Jay, after today's presentation, what's the best way to reach you?

>> Jay Kumar: Here's my e-mail address. It's jayvk01 at the health department.

>> Vivian Gabor: Thank you, Jay, for sharing details of your state's current surveillance efforts with our audience.

>> Jay Kumar: Thank you.

>> Vivian Gabor: Now I'd like to turn to our final speaker, Dr. Mark Siegel, Chief of the Bureau of Oral Health Services for the Ohio Department of Health. Good afternoon, Mark.

>> Mark Siegel: Good afternoon, Vivian.

>> Vivian Gabor: I'm looking at this slide, Mark, just what is "Under Construction"?

>> Mark Siegel: Everyone knows that the word "OHIO" is an acronym for Oral Health Isn't Optional. And I'm just sure there's another acronym in there somewhere about oral health data.

I got the first three, but I'm stuck on the last zero. So I'm going to invite everyone out there listening in webinar land to e-mail me their suggestions for the final O. But I have to caution you, in the current budget and ethics comment, you can't expect any big or valuable prizes.

>> Vivian Gabor: Thank you. I was wondering what that was.

Mark, I know Ohio was one of the first states, when you yourself were one of the leaders in designing effective oral health systems at the state level, beginning with school-based surveillance. Can you begin today by giving us an overview of the type of data you are now collecting in Ohio?

>> Mark Siegel: Yes, we collect both primary data and we use secondary data as well. And the primary data, most of it are data that we collect. But then we collect it through surveys of others.

Specifically, we do an open mouth oral health survey of third graders now with county level sampling, we do that about every five to six years. In Ohio, that translates into close to 400 schools to visit.

And we include BMI as part of the survey process. And in 2007 Dr. Kumar and I were part of an ASTHO web conference on that combination.

In addition to our large oral health surveys, we do, on an annual basis, we survey what we call sentinel schools, and there are 30 sentinel schools that were selected to be representative of the state, and it's easier to do 30 than it is to do 400. So we do that every year so that we can get actual annual estimates for reporting for the MCH Block Grant.

We also do on an ad hoc basis some special surveys about knowledge, attitudes and practices. This is usually either mail or interview surveys. In the past we've done dentists. Head Start staff. Parents. School nurses. It might be a survey of dentists like their use of sealants. Their treatment of young children. Those are some of the other primary data collection we've done.

As far as data, primary data that's collected by others that we get in on, the major one is the Ohio Family Health Survey, which is a large household telephone survey, kind of Ohio's version of the National Health Interview Survey. We have questions on PRAMS and youth data and the other which is very rich comes from Medicaid, we get fluoridation data from Ohio's Environmental Protection Agency, and we use census data.

>> Vivian Gabor: And what do the surveillance data indicate about children's oral health in Ohio.

>> Mark Siegel: In a nutshell, low income kids get more dental disease and are less likely to get early treatment for it because of a lack of money, including lack of dental insurance. And the need to attend to higher life priorities. I call this the lows. Low income and low expectations.

The low expectations are that often if it doesn't hurt, it just doesn't get dealt with. The next slide compares overall data for the last 20 years from our large statewide survey now at the county level.

Most recently we find that 55 percent of Ohio third grade children have a history of caries. Amazingly, like New York's findings. 26 percent have untreated caries. And 43 percent have sealants.

Other than the increase in sealant prevalence, these numbers haven't changed a lot in 17 years. On the next slide, though, we see that the only indisputable disparity is the third graders from low income households have a much greater prevalence of untreated caries. Now, this slide you'll see is trend data and this comes from our sentinel schools. Our statewide surveys of sentinel schools so we can have data points for every year, which is pretty unusual.

On the slide you have to compare the uppermost line and the bottom line for the lower income and the upper income and the line in the middle is just the overall.

>> Vivian Gabor: You've talked about income. Do your data show race and ethnicity to be a significant factor in disparity of outcomes?

>> Mark Siegel: The racial disparities in children's untreated caries prevalence are not clear in Ohio. Perhaps because of a relatively low percent of minority, primarily African American, which is about 15 percent of the Ohio population, may be what's leading to unstable estimates, illustrated by the crossing trend lines. And we don't have usable data for Hispanic Latino ethnicity because less than two percent of Ohio's population is in that category.

>> Vivian Gabor: Thanks, Mark. What do you find, if we go back to the MCH performance measure on sealant prevalence among third graders, what do you see with regard to the disparities in that measure in your state?

>> Mark Siegel: We see in the slide that over 20 years of school-based dental sealant programs appear to be a great equalizer on sealant prevalence. Like Dr. Kumar, I, too, have a slide showing the impact. And it's the bar graph slide that -- there it is -- showing the impact of school-based dental sealant programs. We followed Dr. Kumar's lead and also didn't include New York City when we constructed this graph, that makes an impressive statement about the effectiveness of sealant programs at reaching target populations.

Regardless of race, income, or insurance status, all cohorts at schools with sealant programs achieved the Healthy People 2010 objective. We first shared comparable 1998, '99 data with the nation through a 2001 MMWR article, and I understand that those data and that publication spurred the federal government to put more emphasis on sealant programs.

>> Vivian Gabor: Thank you, Mark. What other data you've collected in data tell us about, in addition to sealants, about access to dental care for kids?

>> Mark Siegel: First of all, there's just no single measure of access and as we've heard recent dental visit is commonly used and as Dr. Edelstein pointed out, the problem is what to make of self-reported data on recent dental visits.

In the next graph, although the validity of the absolute numbers may be subject to debate, such as the 70 percent of low income having a dental visit, disparity is not. Once again, the lines are clear, consistent and disparate for dental visits by income.

Ohio kids from low income families are less likely to get dental care. The next slide helps explain why. Over four times as many Ohio children lack dental coverage as health coverage. We think this may be because too many people are on the Sleepy Hollow Health Plan, originally designed for the headless horseman that plan has no dental no mental and clearly no vision.

In the next slide, we see the dental insurance does make a difference. Kids covered by Medicaid fall between privately insured and uninsured on self-reported dental visit. Once again, the pattern is more believable than the actual numbers. Notice the star on this graph which is the actual Medicaid claims data for three to 18-year-olds, which is much less than the reported dental visits by third graders.

>> Vivian Gabor: Much less. Can you tell us how the Ohio Department of Health has gotten word out and assures access to all these data, both for people, the data at the state level and the data at the local level?

>> Mark Siegel: There are basically three vehicles through which we share our data. Our website, hard copy reports, and publication and professional journals. We've made a special effort to make our website a useful source of data. The web enables us to continually update our system with the most current data as soon as we get it.

On screen, you're seeing the portal to the Ohio oral health surveillance system that is accessed from our website. We not only have a state level profile, but when you click on a county, you get a one-page county profile with demographic, Medicaid, oral health status, and dental care utilization data.

Also community-based prevention and dental care resources, both private and safety net information, is there. What you're looking at now is Cuyahoga County, home to Cleveland.

And if you were to click in the bottom right on those blue hot links, you would get a map like this, which shows all the health professional shortage areas in Cleveland, in the county, rather, and the safety net dental clinics. We have that for every county. Not that every county has shortage area or every county has dental clinics. But where there are, you can get to them from this website.

Next we see that for those more traditional data users, who like to touch and feel the data, we have some hard copy reports. On this slide you see some of the audiences to which we mailed these. These reports are very graphically attractive and they're not too fat. We try and keep it so that they're succinct and user-friendly and they're also available on our website. They can be downloaded.

Finally, for the ultra traditional among us, we have published data-based reports and professional journals. Shown here are three of over 20 publications that we've had over the years. We recently received word of acceptance of a manuscript validating our sentinel schools approach for collecting annual third grade data. It will be published in a future issue of the Journal of Maternal and Child Health.

>> Vivian Gabor: Mark, you have an impressive amount of information in your surveillance system and making it accessible to wide audiences. What can you say has changed or Ohio has done differently because of the information you've collected, documented and disseminated about children's oral health?

>> Mark Siegel: This may seem anticlimactic, Vivian, but for the state dental program in Ohio, at least not all that much lately. The reason that we haven't made recent substantial changes to our program is that we have collected data regularly since 1987 and we made significant changes to the program a number of years ago, and more subtle ones since. The oral health status and the data have not changed all that rapidly.

After our 1987 survey, however, we moved from a large school fluoride mouth rinse program emphasis to school-based dental sealants. That meant staff reduction through attrition and conversion of the personnel dollars to funding for grants to local agencies.

In the next slide we transition from change to real money. When we provided the year 2000 iteration of our data to a state level task force on access to dental care, a set of recommendations emerged and resulted in the creation of loan repayment program for dentists, Medicaid reimbursement to physicians for assessment referral and fluoride varnish application for young children and state grants to support the dental care safety net.

Both Ohio oral health summits 2001 and 2007 kicked off with a presentation of Ohio data on oral health and access to dental care. As you see on the left-hand chart, the data, the access task force

recommendations and the oral health summit led several Ohio charitable foundations to put significant dollars into oral health projects as well. Before 2001, this was unheard of.

>> Vivian Gabor: What's next in using data to improve children's oral health and access to dental care? And as I ask Jay, what are the challenges and opportunities?

>> Mark Siegel: The big challenge is to find ways to get valid and reliable data that are cheap and relatively easy. And I think Jay said that in his presentation.

And to answer the question, but what about, insert your city's name here, because even though we play significant resources into getting data for, say, Franklin County, Ohio, you still don't have data for Columbus, per se.

And the other part of -- the other challenge is keeping data fresh. As I said, on our website we can update the data as we get it, but as far as you need to present it in a fresh manner so that it maintains public interest.

And the next slide are opportunities. The biggest opportunity will come when the stars align and political well for putting population sized resources into effective programs that yield population sized results and data will help oral health to get its piece of the pie. This will unfold through the capital P political process known as the General Assembly. Or maybe through the small p, politics of the State Health Department. But having data can only help us.

With the current economic forecast, however, we're in a holding pattern on the celestial alignment thing.

>> Vivian Gabor: Before we move into our open question and answer portion of the program, I'll go back to the next slide. How should our audience contact you if they have questions after this program?

>> Mark Siegel: E-mail is best because with the budget as it is we can't afford a phone system that assures you'll never reach the person you want to, so you might as well e-mail me.

>> Vivian Gabor: Thank you very much, Mark.

And thanks also to Burt and Jay for all the valuable information you have provided today. I want to remind our audience that there are a variety of resources that our presenters have compiled and are related to today's program. They're posted on the resource page of the DataSpeak website for this program.

I just want to recognize to everyone that it is 3:00. We had originally ended, said we were going to end at 3:00 but we're going to keep going so we can allow you time, presenters time to answer your questions.

We are fortunate to have all our presenters with us to answer your questions. We'll be taking questions both on line and on the telephone. If you want to post a question now on line I know many have posted your questions but simply enter your question in the field at the bottom of the questions box which is located on the left-hand side of the screen and hit enter. You can also submit calls by phone. Operator, could you please tell our phone audience how they can ask the question on the phone.

>> Operator: Thank you. If you would like to ask a question please press star 1 on your touch tone phone now. Questions will be taken in the order in which they are received. If at any time you wish to remove yourself from the questioning queue, please press star 2.

>> Vivian Gabor: I'll let you queue up with the questions for a few of our questions that have come in earlier during the presentations.

We have a question from Tom Wall to Dr. Edelstein. The increase in the prevalence of caries in primary teeth of children two to five was due to an increase in treated caries, or somebody said increase in screening as opposed to untreated caries, decay. Would you comment on the increase in treatment and how it affects the increase in prevalence of caries?

Dr. Edelstein.

>> Burt Edelstein: Hi. As I understand those data, the data point is the percentage of children who have evidence of dental caries experience which would include both those who have treated and untreated disease. The only way that this significant increment could be attributed only to treatment would be if we're looking at children whose caries was treated that would not have been considered caries had they not been treated. In other words, a treatment effect.

And it doesn't seem likely that that could be the full explanation. I think that there are a number of alternative explanations that are more sobering. One is change in demographics. I mentioned that the Mexican American kids which are the only Latino population reported in NHANES had the highest rates of disease.

And so as we have demographic shifts in the population and an increasingly Latino young population, that might explain it. The advent of bottled water and the less exposure to fluoridation, to fluoridated water might explain it in part.

We could be seeing a secular change in either parenting or the use of foods or how foods are offered to children that may in fact explain it. So there are a number of things that could be accounting for this increase. And the critical issue is that there is an increase and that it's in the youngest children, and because caries is a cumulative disease we need to be aware of that.

>> Vivian Gabor: Okay. Thank you, Dr. Edelstein. We have lots of questions that have come in on line. Thank you, folks. One more question before we go to the operator, from Frank, excuse me if I pronounce your name wrong [Catalatno].

He says: The effectiveness of school-based sealant programs is effective. What do you see as the biggest impediment to further implementation of school-based sealant programs? I'll turn the question first over to Dr. Kumar.

>> Jay Kumar: The resources. And also not all schools have space and interest in implementing school-based sealant programs. Although we have tried to expand the sealant program and allowing sites to bill Medicaid and other insurance programs, that in itself is not enough to sustain a school-based sealant program. So they'll have to depend on some kind of grant support to continue the sealant program. So the availability of sufficient amount of money is a challenge. Mark, do you have any?

***>> Mark Siegel*:** I agree with what Jay said. And I think that in the way that we award grants, there needs to be a critical mass. So there may be a handful of low income kids at a school that overall doesn't have a high percent of kids from low income families and it's hard to efficiently target a program toward a school like that. So we won't ever reach everyone.

The challenges of schools getting into schools, because of their focus on testing and like that, it's sometimes they're less sympathetic to preventive dentistry program. So those are some of the challenges.

>> Vivian Gabor: Thank you, Mark. Operator, just want to turn to you. Do we have any phone questions waiting?

>> Operator: We have one phone question in the queue. Julie Janeta.

>> Question: This is more or less a suggestion for Dr. Siegel the acronym, you could say Oral Health is Obtainable.

>> Mark Siegel: I need a data acronym. I'll put that one down. No big invaluable prize for you, but we appreciate your participation.

>> Vivian Gabor: Thank you very much.

Anyone else in the queue, operator?

>> Operator: That's all the questions we have in the queue.

>> Vivian Gabor: I've got plenty here. We've got a question from Jacques. Are there ongoing studies to determine the morbidity and mortality of untreated caries among the pediatric population? I'll turn that to you, Dr. Edelstein.

>> Burt Edelstein: There certainly is an effort to quantify the morbidity and mortality. And there are some pretty sound guesstimates based on data. The estimate that three to four million children each day experience sufficient problems with tooth decay as to impact their function. But there certainly does need to be objective reliable, valid study of those conditions that result from tooth decay. For example, there's questions about children's ability to eat. Children's ability to sleep. Children's ability to attend to school and learning. Children's ability to play nicely with others. Children, the impact of a child with dental pain on the family dynamic. There are a host of questions before you get to the much more severe things that result from the extension of tooth decay through abscess to facial cellulitis and in the tragic case that is so well known to us all, the death of [Dan Monty Driver]. So there's much work that needs to be done and not a great deal of information.

There are small studies such as surveys of dental residency programs, regarding their emergency cases. Those kinds of things and the impact on function. But there's nothing that's nationally representative.

>> Vivian Gabor: Thank you. We have three questions that were almost the same asking Dr. Kumar to please provide more information about what the school dental health certificate effort is in New York. And a question about whether it's mandatory or voluntary.

>> Jay Kumar: It's voluntary at this time. The requirement is on the part of schools to distribute these forms along with medical certificates. This is an attempt to integrate oral health assessment into ongoing medical assessment in schools.

It's interesting that as a result of our combined effort with obesity prevention programs, even BMI is now a requirement in schools. So but on the part of parents, it is to interest them to go and get a dental certificate. It's not mandated in New York, unlike in some other states.

>> Vivian Gabor: Thank you. We have several questions from Dr. Robertson. I'll start with one. Dr. Robertson asks: What do you recommend for preventive measures in very high risk children who develop severe cavitated caries before the age of 24 months? Dr. Edelstein.

>> Burt Edelstein: I think the central concern here is whether the caries process itself is distinguished from the occurrence of cavities and treated separately. Dentistry has traditionally focused its attention on the cavities themselves and providing restorative services that return form and function.

Rather the carology signs that's been well developed primarily through NIDCR's efforts over the last 40 years hasn't been translated into what the medical world would regard as disease management. Not so much prevention, because once the child has the kind of condition that Dr. Robertson describes, it's too late for prevention. Rather, what's needed is to borrow from the medical world the concept of disease management and to regard the caries process itself as the disease and to address that disease process in ways that are biologically sound.

This takes us to a number of policy considerations that have been considered in recent years starting children young enough with dental care so that there is truly the opportunity for primary prevention, identifying children's levels of risk so that differential interventions can be provided according to level of risk. And for those children who are already in the condition that Dr. Robertson described, disease management itself to suppress the caries activity, reduce the bacterial load, control the diet, increase the fluoride availability and frequency on a daily basis and altogether suppress the disease as monitored sequentially through, for example, strep mutants, cultures and saliva. So there's a great deal of science that is way past ready to apply to day-to-day disease management and the next step for the profession, I believe, is to translate those into clinical protocols.

>> Vivian Gabor: Anyone else have anything to add?

I'll go on to a question that was from Lorraine Dumas for Dr. Kumar. She was interested in your slide about the rates of inpatient treatment for dental caries. She asks: What codes are you using to identify inpatient treatment caries for three to five-year-old children.

>> Jay Kumar: We have a publication that details all the codes that we use in counting cases. It's published in the Journal of Public Health Dentistry. If you e-mail me I'll be happy to give you the details.

>> Vivian Gabor: I'll forward that question as well to you, Jay, after we're done.

Someone asks here to all of you: Do any of the speakers have experience with fluoride varnish, should the emphasis be on sealants or varnish? And why or why not?

>> Mark Siegel: I can take the first swing at that.

>> Vivian Gabor: Great.

>> Mark Siegel: First of all, there's no one answer to everything, but it depends on the situation. But from the perspective of community-based prevention programs, if you're talking about a school-based program, then I think sealants have an evidence base when the community prevention task force did an evidence-based review of dental approaches to preventing disease, water fluoridation and school-based sealant programs were the only things that had sufficient evidence to warrant a recommendation.

And if you think about it, sealants, you place them and they have a long-lasting effect from a single intervention. And they target the parts of teeth that are most susceptible to caries. I haven't seen the oral health survey that didn't find 80 to 90 percent of caries to be on pit and fissure surfaces in school-aged children. That's what sealants go after. You place them. They have a long lasting benefit. There have been studies comparing sealants and varnish. I never understood the rationale, because varnish you need to reapply and reapply, periodically, just like you do a regular fluoride treatment. So I think that in the case of school-based programs, unless you're doing something that you're assessing individual, on the individual child basis and identifying those with white spots on smooth surfaces then it would be appropriate to put varnish there. But you want to get that child to a dental home.

But sealants in general I think have a greater use in school-aged. Now if you're talking about other ages, younger aged kids, and you may be looking at them individually on caries risk, then varnish may have a role there.

>> Vivian Gabor: Thank you, Dr. Siegel.

I'll move on to another question if that's okay from Sara Sun. I think this is to any of you, particularly two states. What data have you collected from the preschool population in group care settings? Not only those in Head Start but in the many more in both center-based and home-based nonparental child care settings.

>> Mark Siegel: Once again, if I can jump in, our experience is we did a Head Start oral health survey in 2002, 2003. We actually did more than Head Start.

We did sites that in Ohio were called public school preschool, and we thought we figured out what they were until after we had collected the data and found out that, well, actually in one county it meant one thing and another county it meant another. So we really couldn't describe that population.

And all we did was report on the Head Start data. And we found that 38 percent of the three to five-year-olds had caries experience and three-quarters of them, 28 percent, still untreated caries. About 10 percent had self-reported the parents self-reported that child had a toothache in the last year.

And it's tougher to get to those other groups that were mentioned there. Before we designed our survey, we looked into, we even pilot tested doing it in WIC clinics where we sat around a lot of times waiting for enough kids to come in to matter.

So we ended up landing on doing the larger setting, which is also still a challenge, because in day care and in Head Start they're not necessarily there every day. So you may go one day and think you saw a lot of the kids who were there and don't even know about the kids who weren't there the other days. So there are challenges.

>> Burt Edelstein: If I could add, I'd say that data from small groups in locales can be very, very influential in the policy-making process, because as I mentioned earlier, decision makers often want the most local, most immediate information. So if you do a survey in a couple of small settings and can then show that the findings are consistent with national results, giving you some sense of validity for your findings, you can then take that to decision makers and express that the problem is real and at home and needs attention at home.

>> Mark Siegel: And you have to be careful to understand the data is not the plural form of the word "anecdote."

>> Vivian Gabor: Dr. Kumar, anything from New York?

>> Jay Kumar: No, we have not attempted to collect data on younger children mainly because some of the problems that Dr. Mark Siegel cited. We have completed a survey of Head Start children that's a lot easier to do compared to any other groups.

>> Vivian Gabor: Thank you. Now, operator are there people waiting on line? I have left those folks out at this moment.

>> Operator: At this time we have no questions in the queue.

>> Vivian Gabor: I have one more question for today. If any more questions come in after the program I will forward them to our presenters.

Dr. Edelstein, this can be to you. This was to you but could be to others. With the changing demographics among U.S. children what is known about various ethnic sub populations, particularly Hispanic populations

that may have different caries experience? One of our other questioners asked also about Native American, what is known about what kind of studies there are in groups of Native American populations.

>> Burt Edelstein: If I could start with the Native American, the Indian Health service does a terrific job of monitoring oral health of the population it serves and the information is really quite clear.

Many Native American populations have just extreme rates of early childhood caries, rates that are multiple times the rates of other populations. And that's a sub population of very specific interest. In terms of Latino populations, I think it's important to recognize that NHANES reports on the Mexican American population, but now there are many, many different and distinct Latino populations in the U.S. and the populations do vary by culture. They vary by oral health experience. And it's going to become increasingly important to identify levels of disease and associated risk factors by sub population.

Similarly amongst the Asian populations in the U.S., there are I understand something like 30 different Asian populations represented within the category of Asian Americans. And each of those categories represents differences in culture and beliefs, attitudes, knowledge, and approach to oral health and dental care. And so we have to be careful when lumping, particularly when we're dealing with policymakers who want to address particular populations.

>> Vivian Gabor: Thank you very much. That is all the time we have for discussion today. If you think of more questions, and there are some that have come in that we just don't have time right now, but we will submit those to our presenters and if we will continue to accept questions through the end of this week. Please use the e-mail address mchirc@altarum.org. That's altarum.org. And we'll respond to your questions as soon as we can.

Also, as I mentioned earlier, the program archive will be available on the DataSpeak website in the next few weeks so you can access it at your convenience.

Before you log out and hang up, we greatly want to thank you for your participation. Again, thank our presenters, and we'd like you to take a moment to provide us with some feedback on today's program. You can do so by clicking on the Program Evaluation link on the screen that's up there right now. The short survey will open up in a new window.

Note that we'll be broadcasting several more DataSpeak programs in the coming months. The next program will be on the Healthy Start Evaluation. The case study findings which are part 2 of the National Healthy Start Evaluation. This web conference is scheduled for Monday June 2nd from 3:00 p.m. to 4:00 p.m. Eastern Daylight Time. And announcements of future DataSpeak programs will be sent by e-mail you can check the DataSpeak website in the coming weeks and months at www.mchb.hrsa.gov/mchirc/dataspeak. Thanks to all and that is the end of our program for today.